



Colorproof XF™

GRAPHIC ARTS SOLUTIONS

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MANUAL



12 Color Editor

Color Editor is available as an add-on module. This chapter describes how to use the software to create and manage your spot colors.

12.1 What is Color Editor?

Color Editor was developed to ensure that spot colors in your print jobs are correctly processed.

A spot color is a specially mixed ink that is applied on the printing press, as opposed to a mix of CMYK inks which make up process printing. Spot colors can be produced in a much more vibrant range of colors than can be created from mixing process colors. As an example, they are often used to print company logos.

Many different companies produce spot colors, together with a set of swatch books that show printed examples of these colors.

Color Editor manages spot colors in two different tables:

- an internal table, which ensures the reproduction of predefined spot colors from different manufacturers .



It is important to make sure that the spot color names used in your job files exactly match those saved in the internal table. Otherwise they will not be recognized.

- an external table, which contains spot color definitions in CMYK(OG) and L*a*b* format. Only external spot color tables can be edited in EFI XF. The file extension of spot color tables is BCT.

Before spot colors in print jobs can be output as spot colors, they must first be defined in Color Editor and saved in a spot color table. When the spot color table is loaded in EFI XF, those spot colors are automatically processed correctly.

12.2 Spot color settings in EFI XF

If you have purchased Spot Color Option as an add-on module, the program windows System Manager and Job Explorer are extended as follows:

- a program icon appears in the toolbar
- an additional tab "Spot Colors" appears in the "Color" bar of property inspector



12.2.1 System Manager

12.2.1.1 Input bar

The following workflow setting is available on the “PS/PDF” tab:

In-RIP Separation

If your print job already contains RIP settings, e.g. from an external RIP or from a DTP program, you can choose whether these will be applied.

Select "Disable" to print all composite or in-RIP separated jobs as composite files. Separated files will still be processed as separated.

Select "Enable" to apply all available in-RIP information to print jobs. If no such information is detected in the print job, files are automatically output as composite.



PostScript files must contain not only details about color separations (process colors and spot colors), they also require start code information. This start code may be missing from PostScript files created by certain types of RIPs. In this case, the in-RIP information cannot be properly interpreted and the file will be output as composite.

If you select "Force", all files are processed as separated files.

12.2.1.2 Color bar

The following workflow settings are available on the “Spot Colors” tab:

Spot Colors

Select a spot color table that contains your previously defined spot colors from the drop-down list box. Spot color tables must be saved to the following folder:
...\Server\Profiles\Spotcolor.

Search Priority

Here you define the order in which spot colors are searched for.

Spot colors can be defined in both the CMYK, CMYKOG, CMYKRGB and L*a*b* color spaces; they may also be included in the internal table. EFI XF uses the first instance of each spot color according to the specified search order.

For example, if you select the search order “L*a*b* - CMYK - Internal”, EFI XF will first look to see if the spot color is defined in L*a*b* values. If so, this spot color will be used. If it is not available, EFI XF will continue to search for the spot color as a CMYK definition. Finally, if the spot color is not available in either L*a*b* or CMYK, EFI XF will search the internal spot color table.

Generally speaking, the device-independent L*a*b* color space produces the best color results, so it is recommended that you search for L*a*b*-defined spot colors first.

Replace unknown spot colors with default

Select this check box if you wish undefined spot colors to be output in a distinctive shade of orange. This makes them immediately recognizable in the printout.

12.2.2 Job Explorer

An additional tab “Spot Colors” is available on the “Color” bar.

The settings on this tab become enabled as soon as you load a job that contains spot colors, so that you can determine how they will be handled during job processing.

The available settings are identical to the workflow settings found in System Manager.

In addition, this tab identifies which colors are contained in a selected print job.

Process colors and spot colors are listed with details of whether they are known or unknown. This enables you to check whether spot colors will be processed correctly without first having to print the job.



By unchecking the check box next to a process color or spot color, you can instruct EFI XF to exclude that color from the printout.

How spot colors will be handled in EFI XF depends on the settings that have previously been made for the workflow. For example, the workflow settings may specify that unknown spot colors should be replaced with a default color.

However, to print color-accurate spot colors, they must first be defined in a spot color table.

When spot colors have been defined, the spot color table has to be selected in EFI XF. A spot color table can be applied to:

- all print jobs in a workflow. Refer to “Spot Colors” on page 12-2 for further information.
- individual print jobs. In this case, select a spot color table on this tab and click “Save” in the toolbar. The spot color table selected on this tab overrides the spot color table selected for the workflow in System Manager.



Spot color tables must be saved to ...\\Server\\Profiles\\Spotcolor. Otherwise, they cannot be selected in EFI XF.

The following table illustrates how you can use different combinations of settings to influence spot color output for an individual print job.

Option	Spot Color table (System Manager)	Spot Color table (Job Explorer)	State	Description
Replace unknown spot colors with default	x		On	Spot colors defined in the table selected in Job Explorer will be printed correctly. Spot colors defined in the table selected in System Manager will be treated as "undefined". Undefined spot colors will be replaced with a distinctive shade of orange.
Spot color table	x		Selected	
Spot color table		x	Selected	
Replace unknown spot colors with default	x		On	Spot colors defined in the table selected in System Manager will be printed correctly. Undefined spot colors will be replaced with a distinctive shade of orange.
Spot color table	x		Selected	
Spot color table		x	Not selected	
Replace unknown spot colors with default	x		Off	Spot colors defined in the table selected in Job Explorer will be printed correctly. All other spot colors will not be recognized. During job processing, an error message will inform you that your print job contains undefined spot colors. To print a job with undefined spot colors, uncheck the check box next to the spot color name.
Spot color table	x		Not selected	
Spot color table		x	Selected	

Option	Spot Color table (System Manager)	Spot Color table (Job Explorer)	State	Description
Replace unknown spot colors with default	x		Off	<p>No spot colors will be recognized.</p> <p>During job processing, an error message will inform you that your print job contains undefined spot colors.</p> <p>To print a job with undefined spot colors, uncheck the check box next to the spot color name.</p>
Spot color table	x		Not selected	
Spot color table		x	Not selected	

12.3 User interface

In the toolbar of EFI XF, click “Open Color Editor” to launch the application.



Scroll bar for defining the transparency (opacity) setting.

Edit box for searching for a specific spot color in the loaded spot color table.

Area displaying 100% color values and color patches.

Area for specifying the name and color space in which the spot color will be defined.

Drop-down list box for defining which type of spot colors will be displayed.

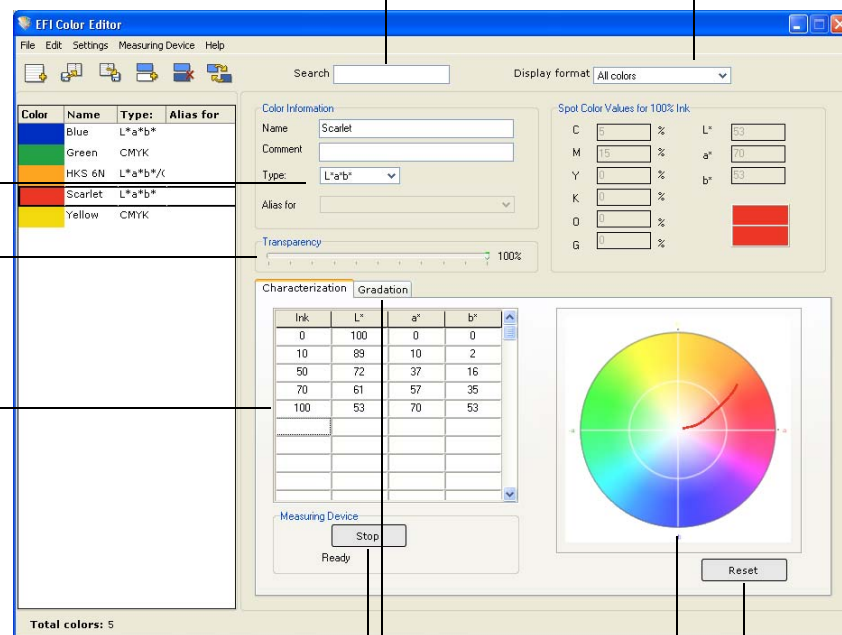
Characterization table for defining continuous tones between 0% and 100%.

Multi-functional button. Creates a connection to a measuring device if the L*a*b* color space is selected. Also used to start/stop a measuring process.

Opens a dialog for modifying the lightness setting along the gradation curve.

Resets the orientation of the diagram to its original position. The color values are not affected.

Diagram depicting color space and brightness of input values. Can be rotated to provide 3D view.



12.3.1 Menus

The menu bar contains the following commands:

12.3.1.1 File menu

New

Choose this command to open a new spot color table.

Open

Choose this command to open a dialog, from which you can navigate to the spot color table you want to open.

Import

Choose this command to open a dialog, from which you can navigate to the spot color table you want to import, e.g. add to an already loaded spot color table.

Show Internal

Choose this command to display the integrated spot color table.

Save

Choose this command to save the changes you have made to the loaded spot color table.

Save As

Choose this command to save the changes you have made to the loaded spot color table under a new name.

Exit (Windows)/Quit EFI Color Editor (Macintosh)

Choose this command to close Color Editor.



In the Macintosh version of the software, you will find the command in the EFI Color Editor menu.

12.3.1.2 Edit menu

Add Color

Choose this command to add a new color to a spot color table. This function is also available via the context menu.

Delete Color

Choose this command to delete a selected spot color. This function is also available via the context menu.

Search and Replace

Choose this command to open a dialog in which you can search for and replace the name of a spot color. This function is also available via the context menu.

Overprint Settings

Choose this command to open a dialog for making global overprint and gamma settings that apply to all the spot colors in your spot color table.

12.3.1.3 Settings menu (Windows only)

Language (Windows only)

Choose this command to change the language in which the user interface is displayed. By default, Color Editor is displayed in the language of the operating system.



On a Macintosh, you can change the language via the international settings in "System Preferences".

Measuring Device

Color Editor supports a number of different measuring devices. Choose your measuring device from the submenu.

12.3.1.4 Help menu

Help

Choose this command to start the online Help.

About EFI Color Editor

Choose this command to open a window with details of your program version.



In the Macintosh version of the software, you will find the command in the EFI Color Editor menu.

12.3.2 Toolbar

The toolbar contains the following buttons and functions:



New

Click this button to create a new spot color table.



Open

Click this button to open an existing spot color table.



Save

Click this button to save your spot color table.



Add

Click this button to define a new spot color. This function is also available via the context menu.



Delete

Click this button to delete a spot color from the spot color table. This function is also available via the context menu.



Search and Replace

Click this button to open the "Search and Replace" dialog.. This function is also available via the context menu.

Search

Use this edit box to search for a specific spot color. Type in the name of the required color and press <Enter>.

Display format	Use this drop-down list box to select the color space(s) in which you wish to display your spot colors.
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12.4 Defining spot colors

If EFI XF detects a spot color that has not been defined, an error message is displayed and job processing is aborted.

In order for spot colors to be processed and output correctly, they must first be defined in Color Editor.



In Job Explorer, you can check what workflow settings have been made for the treatment of spot colors. Unknown spot colors are listed in Job Explorer on the "Spot Colors" tab of the "Color" bar.

To define a spot color, proceed as follows:

1. Click "Open Color Editor" to launch Color Editor.

A dialog is displayed if spot color tables have previously been saved to EFI XF\Server\Profiles\Spotcolor. Select an existing spot color table from the list or select "-none-" to create a new spot color table. The program window opens.



Please note that it is only possible to select one spot color table for each workflow. Therefore, it is advisable to add any new spot colors to an already existing table to ensure that all spot colors are recognized.

If no spot color tables exist, a message asks you if you want to merge unknown spot colors with the selected spot color table. If you click "Yes" the "missing.tab" file is opened. This file is automatically created in the folder EFI XF\Server\Profiles\Spotcolor whenever EFI XF detects an unknown spot color. Click "No" to open an empty spot color table.



Once you have defined the new spot colors, it is advisable to delete the file "missing.tab", as otherwise the existing file is added to, not overwritten, when new spot colors are detected. Deleting the "missing.tab" file ensures that a new one is created every time an undefined spot color is detected.

2. If you are adding a new spot color to an existing spot color table, click "Add".

If you are creating a new spot color table, proceed directly to the next step.

3. In the edit box, type a name for your spot color. The name you define must match the name used in the application in which the file was created.
4. Add any comments, if required.

5. From the drop-down list box, select the spot color type. You can choose between:

- L*a*b*

- CMYK, CMYKOG or CMYKRGB

When you select the spot color type CMYK, CMYKOG, L*a*b*/CMYK or CMYKRGB a check box "As InkJet CMYK(OG/RGB)" becomes available. Select this setting to output your spot color using the full color gamut of the connected inkjet printer, as defined by the selected media profile. If you leave this setting unchecked, your spot color will be output using the smaller color gamut of the printing press, as defined by the selected reference profile.



If you define a spot color in the CMYKOG or CMYKRGB color space, you must use the color gamut of the connected ink jet printer. This setting is enabled by default and ensures that pure orange and green or pure red, green and blue inks are used.

- L*a*b*/CMYK

- Alias

Select "Alias" if the spot color you are adding already exists under a different name. Then choose the appropriate spot color from the "Alias for" drop-down list box.

As a practical example: if you have a Pantone color whose name is not written correctly and is therefore not recognized in EFI XF, you can select "Alias" to map it to the right color. This saves you having to define it as a new color.

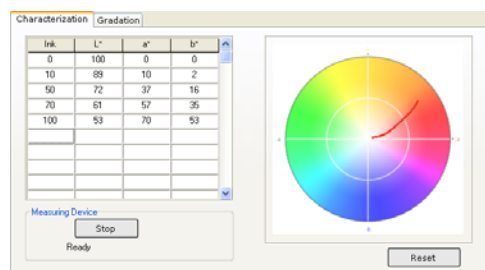
To "map" a spot color to a predefined spot color, you must first display the internal spot color table. To do so, select the appropriate command from the "Edit" menu.

6. Use the slide bar to define the percentage of transparency. A setting of 0% equals 100% opacity.
7. Click the "Characterization" tab. The characterization table with color values for 0% and 100% inks is displayed.
8. Type in the full-tone (100%) color values of your spot color in the selected color space(s).



CMYK color codes can be purchased from your spot color manufacturer.

To obtain L*a*b* values, you may first need to measure a printed patch of the spot color using a measuring device.



You can view your spot color:

- as a color patch in the “Spot Color Values for 100% Ink” area
- in the 3D diagram



The 3D diagram depicts the 0% (white point) and the 100% value of your spot color.

By holding down the left mouse button and dragging the cursor, you can rotate the 3D diagram to assess your spot color from any chosen angle.

9. Define continuous tones for your spot color, as described in the following steps. If you do not need continuous tones, proceed directly to step 12 to save your spot color table.
10. Click the “Characterization” tab.
11. Select an empty row in the table and type the percentage of ink and the color values. Then press <Enter>.



If you are using a Macintosh, click the “+” button below the table to add a new row. To type a percentage of ink or a color value, double-click and overwrite an existing value.

If you do not know the precise continuous-tone color values for a color defined in the $L^*a^*b^*$ color space, you can use one of the supported measuring devices to measure a printed color patch of the required color.

To do this, first connect your measuring device to the USB port of your computer. Then click “Connect” and follow the on-screen instructions to calibrate your measuring device.



Make sure that the $L^*a^*b^*$ color space is selected. Otherwise the “Connect” button will not be enabled.

When your device is ready for measuring, the name of the button changes to “Ready” and the status message “Calibrated” is displayed.

Measure a color patch. The color values are automatically entered in the table.



The 0% value in the table represents the color of the media. Initially, it displays the unmeasured value for pure white. However, by following the described procedure, you can measure the $L^*a^*b^*$ values of the paper white. This enables spot color values to be converted for use with different media and ensures that color accuracy can be maintained on any color substrate.

If you are using an EFI ES-1000, Best Eye or GretagMachbeth Eye One measuring device, you will find further information in “Connecting the ES-1000” on page 11-15 and “How to measure with ES-1000” on page 11-15.

12. If necessary, repeat step 10 to define additional continuous tones.

13. Click “Save” to save your spot color table.

Spot color tables are saved by default to the following location: Server\Profiles\Spotcolor. Only spot color tables saved to this folder can be loaded in EFI XF.

When the spot color table is loaded in EFI XF, the spot colors are automatically processed correctly in your print jobs. Refer to “Spot Colors” on page 12-2 for information on loading spot color tables.

12.5 Editing spot colors

12.5.1 Modifying the gradation

In theory, the color gradation from 0% to 100% should be linear. However, in practice this is not always the case.

If you are printing your spot color at, for example, 50% and ascertain that the color is too bright or too pale in the printout, you can remedy the problem by adding or subtracting color at the 50% mark along the gradation curve.



Please note that this setting should only be performed by experienced users.

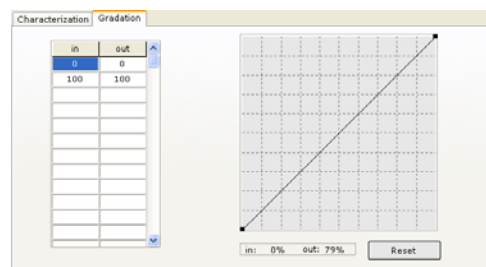
To compensate for non-linear gradations, proceed as follows:

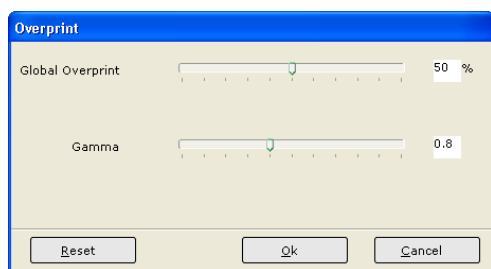
1. Click the “Gradation” tab.
2. To modify the strength of color, click a point along the curve to define a node — the coordinates of the current cursor position are displayed below the gradation curve to help you locate the correct point.

By selecting the defined node and dragging the mouse to the required position, you can influence the color. Drag the mouse upward to add more color, or downward to subtract color.

Alternatively, you can type the required coordinates directly in the table.

3. Click “Save” to save your spot color table.





12.5.2 Modifying the overprint and gamma values

In the “Overprint” dialog you can make global overprint and gamma settings. These settings apply to all L*a*b* spot colors in the spot color table.

To open the “Overprint” dialog, select Edit > Overprint Settings.

Global overprint

Use the “Global Overprint” sidebar to define how two or more colors will behave when printed on top of each other.



When printed individually, colors are unaffected by this setting.

A higher setting will result in a darker printout. For example, an overprint value of 100% means that the colors will be completely added to each other — something that is not possible on a proper printing press.

A lower setting will result in lighter printouts. This is because colors appear more opaque and hide parts of other colors.

Gamma

Use the “Gamma” sidebar to modify the dot gain simulation for overprinting spot colors. The setting is applied to areas with a mixture of spot colors and process colors or to areas consisting of more than one spot color. It lets you define non-linear behavior for overprinting.

A value of less than “1” will result in a darker output, whereas a value of greater than “1” will produce lighter colors. The default setting is 0.8.

When you have finished making your changes, click “Ok” to save your changes and close the dialog.



The settings you make for gamma and overprinting apply globally to all the colors in the selected color table. Therefore, to apply settings to specific spot colors only, you will need to create separate spot color tables.

12.5.3 Searching for and replacing spot colors

To open the “Search and Replace” dialog, select Edit > Search and Replace.

Here you can replace one spot color name with another.

Find color

Type the name of the color you wish to search for and replace.

Replace with

Type the new color name.

Color Editor will search for “part” names. For example, if you wish to replace the spot color name “Deep Sea Green” with “Deep Sea Blue,” you would type “Green” in the edit box “Find color” and “Blue” in the edit box “Replace with.”

To search for full color names only, select the check box “Match full color name.”

Use the buttons “Replace” or “Replace All” to rename your spot colors. If you select the check box “Confirm replacement,” a message will appear when Color Editor finds a match. To replace a color, click “Yes” in the dialog.

When you have completed making your changes, click “Close.” Then click “Save” to save your changes.

